

THE AMERICAN JOURNAL
... OF ..
OPHTHALMOLOGY.

VOL. XVI.

SEPTEMBER, 1899.

NO. 9.

ORIGINAL ARTICLES.

A CASE OF SPINDLE-CELL SARCOMA OF THE
ORBIT.

BY HENRY DICKSON BRUNS, M.D., NEW ORLEANS, LA.,
AND

BY ADOLF ALT, M.D., ST. LOUIS, MO.

THE following history accompanied a specimen consisting of the upper lid, orbital tissue, and eyeball kindly sent me for examination about fourteen months ago by Dr. Henry Dickson Bruns, of New Orleans, La.:

On July 25, 1898, E. M., a white boy, 4 years of age, was brought to the Eye Department of the Eye, Ear, Nose, and Throat Hospital at New Orleans, La.

The history given was that two months previously a swelling like a stye had been noticed growing on the edge of the right upper lid. The boy was perfectly healthy and well-nourished. On examination a tumor of the size of a walnut was found situated in the right upper lid causing great swelling and giving the lid a red and angry look. Below the lid the chemotic conjunctiva protruded to a considerable extent.

Considering it possible that this was an abscess of the lid and at the same time in order to gain some knowledge of the nature of the swelling—if it was not an abscess, a deep incision was made into the tumor on July 27. This incision was made through the skin of the lid and carried quite deep. Having penetrated the skin the knife plunged into a soft, freely-bleeding mass. No pus was found. The diagnosis of a malignant

tumor was now made and the extirpation of all the tissues concerned was advised.

Three days later, on July 30, the mass was found to increase rapidly in size.

On July 31, the operation was performed under chloroform anaesthesia. It consisted of the removal of the whole upper lid well up to the eyebrow and enucleation of the eyeball, followed by thorough evisceration of the orbital tissues. The cavity was then packed with iodoform gauze.

August 2. Patient had rested well during the night. The highest temperature had been 99.4° F. Patient was beginning to eat heartily.

August 6. The dressing was changed and no sign of suppuration was found. The patient was now discharged from the ward.

After this he came daily to the clinic and the orbit was dressed with iodoform. Healing progressed rapidly.

A few months later Dr. Bruns wrote me not yet to report the case, as a relapse had set in.

On July 12, 1899, Dr. Bruns again wrote me that the patient had died on April 15, 1899, from exhaustion after recurrence of the tumor. He further said, that the point of greatest interest in this case to him had been the extremely robust appearance of the child weeks after recrudescence.

Macroscopically, the hardened tissue of the orbit and upper lid formed a uniformly whitish-yellow mass of firm consistency. There was a barely recognizable sulcus below the lid margin, due to the pushing outward of the whole palpebral conjunctiva of the upper lid together with the bulbar conjunctiva of the upper half of the eyeball.

The only pathological condition the eyeball presented macroscopically was a partially dim lens.

In order to examine the specimen more conveniently I removed the eyeball from the adherent orbital tissue and lid.

The tissue of the tumor proved to consist of densely packed small spindle cells, the arrangement of which corresponded with that of other similar tumors. No intercellular tissue could be found, yet bands of connective tissue, remnants of the normal orbital tissue, separated the spindle cells in many places and directions, thus giving the tumor here and there an alveo-

lar appearance. The tumor throughout contains a great many blood vessels. Most of these had distinct walls, but there was also quite a number of blood channels which appeared to be without walls.

The surface of the tumor is covered by the lid and conjunctiva. In longitudinal sections the upper lid is represented by a narrow band of tissue in which are found the different elements of the normal lid compressed together and partly atrophied. The Meibomian glands have disappeared, except near the lid margin where glands and eyelashes seem to be about normal. All of this tissue is infiltrated with round cells.



At the lid margin¹ the conjunctiva, as has been stated, is pressed forward by the tumor tissue to such an extent that the conjunctival fornix is in the same line with the remainder of the conjunctival tissue, convex instead of concave. The conjunctival surface is very uneven on account of numerous and high inflammatory papillæ. The outer layers of epithelium have been shed and long cylinders and spindle-shaped epithelial

cells, except near the lid margin, form the only covering. From the exposure to dirt and coal-dust, these epithelial cells contain minute particles of anorganic pigments giving the layer a grayish-brown appearance. The tissue lying beneath the epithelium consists of compressed strands of connective tissue which are densely infiltrated with round cells. Here and there the site of a former gland of Krause or an adventitious lachrymal gland can be suspected from the peculiar gland-like arrangement of the round cells.

In spite of the enormous stretching, there is a well-defined and unbroken line between the lid and conjunctiva on the one and the tumor tissue on the other hand. This line was as yet nowhere broken through in the whole series of sections which I made.

Contrary to this condition in front, where the soft and elastic tissues were the only opponents to the growth of the tumor, hardly any but tumor tissue is found backwards in the orbit, the orbital tissue having given way altogether to the invader. There is not a trace of fat tissue. The only exception to this rule is made by the tissue of the extrinsic muscles of the eye after they have pierced Tenon's capsule, as this latter together with the eyeball had as yet offered a successful resistance to the growth of the tumor.

The optic nerve is partially atrophic and cedematous. The same condition is visible in the optic papilla which shows unmistakable signs of a former neuritis optica which has passed over into atrophy with disappearance of nerve-fibers, the place of which was taken up by the cedematous fluid.

In consequence of this cedematous swelling, the fibers of the lamina cribrosa represent an arrangement as I have seen in a few cases only. In the longitudinal section a part of them forms an arch forward toward the interior of the eyeball, while a larger portion forms a similar arch backward, as we see it in glaucoma. Thus, a lens-shaped space appears between these two arcs in which there are hardly any fibers appertaining to the lamina cribrosa. This, I think, shows that the cedematous condition came on at a later period than the atrophy of the nerve-fibers.

The pia mater sheath of the optic nerve is densely infiltrated with round cells, but no tumor-cells have entered the intervaginal space as yet.

The blood-vessels of the retina, choroid, ciliary body and iris are all empty, and these tissues are oedematous throughout.

The crystalline lens shows beginning degeneration of lens-fibers, and the peculiar oedema-like changes in the capsular epithelium-cells, which I have described *in extenso*, in the February, 1899, number of this Journal.

The portion of bulbar conjunctiva which was attached to the lower half of the eyeball showed innumerable cells undergoing a mucoid degeneration—so-called goblet-cells.

HISTORICAL SKETCHES.

BY C. M. HOBBY, M.D., IOWA CITY, IOWA.

COUCHING FOR CATARACT.

CONCERNING this method of treating senile cataract, which is the favorite operation of the novelist, and perhaps of the surgeon who remembers his delight in the stories of Charles Reade better than he does his teaching concerning ocular surgery, De Wenzel, in his "Manuel de L'Oculiste," (Paris, 1808) says:

"La dépression de la cataracte est une opération qui a été pratiquée de toute antiquité, jusqu'au milieu à peu près du siècle dernier, et qui maintenant est tombée, pour ainsi dire, et à juste titre, en désuétude. Cette méthode de guérir la maladie connue sous le nom de cataracte, a été remplacée par celle qui consiste à extraire le cristallin altéré."

Nevertheless, the text-books continued to describe this operation as an allowable one, past the middle of this century, and from my observation, as given herewith, it will not have passed into "innocuous desuetude" at the end.

The whole history of the substitution of extraction for resection is interesting, but no more terse presentation of the objections to couching can ever be given than is found in De Wenzel, written more than ninety years ago. He says

there are innumerable objections, the most important of which are (I translate and abridge):

1. Pain sharper and stronger than after extraction; frequent vomiting often leading to violent ophthalmia followed by abscess of the cornea.
2. Separation of the retina and choroid, the lens acting as a foreign body and producing atrocious pain that only ends with life.
3. Hæmorrhages into all parts of the eye.
4. Operation limited to hard cataracts.

Yet, nearly seventy years later, Haynes Walton, in his very practical text-book (third edition, 1875), says: "Although displacement is a very inferior operation to extraction, it should not be condemned or made obsolete. More success may be obtained from it in the hands of unskillful and inexperienced operators than from any form of extraction, because it is an easier operation and there is very much less risk of accidents during its performance. I have seen good results obtained by men who would probably never get success by extraction."

In the early seventies there was a general surgeon in Iowa of deservedly high reputation, who couched a great many cataracts; and I enucleated two eyes upon which this operation had been made, on account of excessive pain and irritability, each as a preliminary to extraction of cataract in the remaining eye. I made a reclinement in one case in 1877—a very feeble man 94 years of age, with atheromatous arteries, upon whom I feared the effect of ether, and the very fair vision obtained lasted him until the termination of his life several months later. Since then, until this last half of the last year of the century, I have seen no instance of reclinement nor heard of any operator who still used it.

This was a case in which a man of 69 years had been operated on some weeks previously by what to appearances was the old operation of depression rather than reclinement. He said the operation had been repeated several times. The pupil was clear; the iris responding very feebly to a mydriatic; the lens well placed below and apparently only slightly movable, and the vision with +10.00 D. $\frac{1}{2}$ %, not capable of improvement. No reason was appreciable why the vision should not have been as good as after an extraction. That is, the cornea, vitreous, and fundus were apparently normal.

PTERYGIUM AND BURNS OF THE EYE.

The persistence with which obsolete methods are perpetuated in literature is doubly illustrated in the second volume of "Sajous' Annual and Analytical Cyclopedie of Practical Medicine" in the elaborate article upon "Diseases of the Conjunctiva." I will leave to someone else the criticism of that part concerning "Granular Conjunctiva," and the old story of "Egyptian Ophthalmia," simply protesting against one passage.

"It prevails in the Western prairies, and is found scattered widely over the country."

But, under the title Pterygium, none of the observations as to causation or treatment, made in the last quarter of a century, is mentioned. I suppose a great many besides myself, influenced by the clear technique and the beautiful picture of Wells, of operation by ligation, have employed that method once, but has anyone repeated it? Yet, under treatment, the author gives "excision and ligature," and if the growth be very large, splitting and transplantation above and below, not a word about the conjunctiva. Nothing is mentioned of transplantation, of removal and sliding the conjunctiva down so as to bring the cicatrix under the lower lid; of Hotz's plan of loosening the conjunctival attachment; or of the advantage of separation from the cornea by evulsion instead of cutting.

He says it is "especially common among persons who are submitted to the inclemencies of the weather; sailors, coachmen, farmers, and others," which is pure hypothetical closet etiology. For sailors are *not* subject to pterygium, and farmers are in some places and not in others, and less so in inclement countries than in some not subject to discomforts of the weather.

Again, the treatment of burns by lime, acids, hot water, etc., does not represent modern usage, and is not such as can be thoroughly or practically approved.

The author says: "If the substance inflicting the burn is lime, the eye should be washed with a diluted or weak solution of a mineral acid, or if this is not at hand, all particles should be removed by forcibly flooding the eye with water from a hose or spigot. If an acid has caused the burn, it should be neutralized by a weak solution of borax, bicarbonate of soda, or of common salt if nothing else be at hand."

I submit that this is also closet or theoretical therapeutics, based on "alkalies are neutralized by acids, acids by alkalies." But unslaked or slaked lime in the eye, adherent to the conjunctiva, it is impossible to detach with water. No eye could stand the stream of water capable of removing lime, and water will only increase the slough. Sulphuric acid burns where it touches; flood the eye with water, or "a weak solution of alkali," and the entire conjunctiva is burned and symblepharon results. It has been known from time immemorial that oils and fats promptly limited the caustic effect of lime in the eye, and in addition they greatly facilitate the removal of the adherent particles. While vaseline may be preferred, any bland oil or animal fat, melting at the temperature of the body, will immediately arrest the caustic effect of lime. And this is also true of the action of mineral acids; if the eye can be washed out with oil before the acid is diluted with the tears the eschar will only involve the epithelial surface; if the acid becomes diluted and remains it will penetrate the subconjunctival tissues and also burn the integument externally.

A CASE OF EARLY DIAGNOSIS OF A CHOROIDAL SARCOMA. REMOVAL OF THE EYEBALL AND EXAMINATION.

BY ADOLF ALT, M.D., ST. LOUIS, MO.

WHILE the number of cases of choroidal sarcoma reported in literature is already very large, and while, undoubtedly, every oculist has seen quite a number of such cases without reporting them, cases with an early diagnosis and an early removal are still quite rare. Many a case which has been seen and diagnosed at a very early period only comes for removal at a very late stage, and usually the surgeon who operates is not the one who has made the early diagnosis.

It is not easy to make such an early diagnosis to one's entire satisfaction, as there are the fewer absolutely diagnostic symptoms the smaller the growth is, and there always remains a certain risk in recommending the removal of an eye with comparatively good vision and causing but little trouble to the individual. Yet, on the other hand, we may in such doubtful cases, by considering carefully all possibilities and probabilities come to a diagnosis which is all but certain, and if we have arrived at this and the patient has sufficient confidence in our judgment to assent to the removal of the eye at such an early period, the subject is almost certain to be rid of this disease for the future.

There can be no doubt as to the propriety of removing an eye with a choroidal sarcoma at as early a stage as possible; yet, the question still remains an open one, by what means can we make sure of our diagnosis at an early stage?

The following case in point represents the earliest stage at which I have been able to make such a diagnosis and to verify it by examination of the enucleated eyeball. I am aware of the fact that a few cases are known which were similar to mine, and I know that the late O. Becker diagnosed and removed a choroidal sarcoma which was not even half the size of mine, although I do not know whether he ever reported the case. It is not referred to by Fuchs in his monograph.

December 12, 1897, J. D., an apparently perfectly healthy

and strong railroad man, 31 years of age, came to consult me about his sight. He stated that for several weeks he had noticed a peculiar sparkling and a shadow before the left eye. That was all he complained of.

Status præsens.—Outwardly both eyes appeared perfectly normal. Iris and pupillary reaction normal. V. R. E. $20/_{XL?}$ with + 1.5 D. $20/_{XX}$. V. L. E. also $20/_{XL?}$ with + 1.5 D. $20/_{XXX}$, not further improved. Tn. Perimetric examination revealed an oval scotoma which began about 10° outwardly from the site of the papilla optica and seemed to reach to the very periphery, although it was not of equal density in all parts. Its longest diameter corresponded with the horizontal meridian and it reached to about 15° above and below it at its widest portion.

Corresponding with this defect the ophthalmoscope revealed to the nasal side of the papilla optica an area of a diameter of about $4\frac{1}{2}$ papilla diameters in the horizontal, and 3 in the vertical direction, which was slightly raised above the surrounding retina. From its highest prominence it gradually fell off to the level of the surrounding tissue. This raised area appeared yellowish-white with red patches, the retina was slightly wrinkled, the blood-vessels passing over the raised area were slightly tortuous.

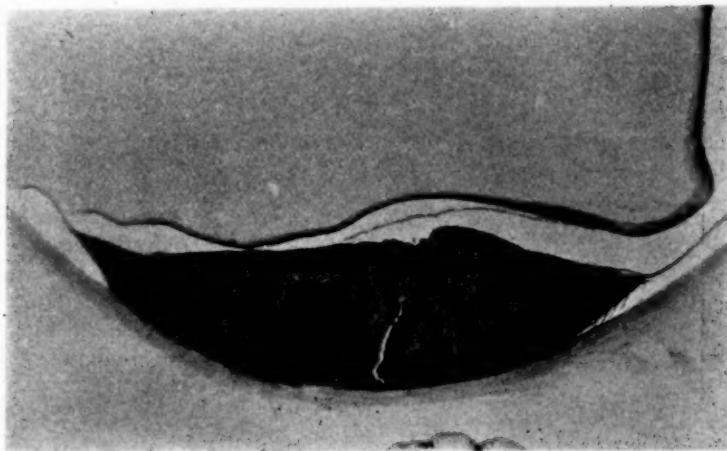
From the general good health of the patient and from the lack of any symptoms of syphilis or tuberculosis, as well as of any inflammatory symptoms, I concluded that in all probability I had to deal with a choroidal sarcoma. I informed the patient that I suspected this, but that my diagnosis was not absolutely certain and that I would wait a little longer before deciding on what to do. Seeing no particular use in treatment I ordered none.

January 18, 1898, the patient returned to my office, stating that he thought he could not see quite so well and that the sparkling annoyed him in his work. I found V. to be the same, the scotoma, perhaps, a little larger.

The only difference in the ophthalmoscopic appearance was that a number of pigmented spots had appeared, especially in the center, and some larger and smaller ones in the periphery, giving the raised area a more grayish tint. Tension was still normal; there was no pain and no other new symptoms.

I now told the patient that I felt almost certain that he had a sarcomatous growth in this eye, which if allowed to remain and grow would certainly endanger his life. That, on the other hand, a removal of the eyeball containing the sarcoma, at so early a date, would, as far as experience could tell, remove this danger from him. Being the father of a family for whose welfare he felt it his duty to preserve his life and working capacity as long as possible, he unhesitatingly consented, February 3, 1898, to have me remove the eye.

The healing, after the operation, was normal and uninterrupted.



On dividing the eye after hardening for 24 hours in formalin, the macroscopical appearance of the background of the eye corresponded with the ophthalmoscopic picture. The raised portion did not, however, reach as far peripherally as the scotoma had led me to believe. Cutting vertically through the highest part of the raised area I found a firm flat tumor, to the apex of which the retina was more firmly adherent than in other parts, no layer of exudation was visible between the retina and tumor. This tumor measured in the horizontal direction, where it was largest, 10, and in the smallest portion, 7 mm., its height nowhere exceeded 3 mm.

Microscopically this tumor, as is usual with those found in this region, consisted of densely packed spindle-cells, which formed larger bands, crossing each other in different directions.

Here and there aggregations of round-cells were found. The spindle-cells in places, and more particularly near the edges of the tumor, contained pigment granules of various shades of brown. At the margin the tumor gradually passed over into a normal choroid. No tumor-cells had penetrated backwards into the sclerotic, although the tumor was adherent to this membrane.

The surface of the tumor was covered, except in its highest central portion, by the lamina vitrea and the pigment epithelium layer. The cells of the latter were proliferating so as to form considerable cell aggregations in spots. The microscope also revealed a minute layer of a homogeneous exudation containing pigmented cells and pigment granules, which caused the adhesion between the retina and the tumor. In the center of the tumor where this adhesion was firmest some pigment cells had entered the retinal tissue. The retina as far as in contact with the tumor showed enlarged and filled blood-vessels, the rods and cones were missing or undergoing degeneration and the parallelism of the granular layers was disturbed. The nerve-fiber layer was somewhat infiltrated with round cells. The remaining tissues of the eyeball were somewhat hyperemic, but not otherwise altered.

As, I think, I had a perfect right to expect, there has been no recurrence to this day (19 months) and I do not apprehend any in the future.

The report of this case was prompted by a paper by P. Silex, of Berlin (*Berliner klin. Wochens.*, August 7, 1899), "On the Early Diagnosis of Choroidal Sarcoma," of which the following is a partial translation:

November 4, 1898, Dr. X, then about 50 years of age, who had previously been examined elsewhere, called on me to give him my diagnosis. He said that his health was good, that he was myopic but could see well, except that for some longer time he had now and then noticed a peculiar sparkling before his right eye.

I found R. E. M. = 3.5 D., V. = $\frac{2}{3}$; L. E. M. 5, 5 D., V. = $\frac{2}{3}$. He read smallest print well with either eye. T. was equal and not increased. The field of vision when tested with the fingers was complete. The perimeter showed outwards from the point of fixation a small, so-called relative negative

scotoma, that is, the white object, 5 mm. square, was not perceived as well in this part.

The ophthalmoscope revealed in both eyes narrow temporal staphylomata, corresponding with the myopia, otherwise a normal fundus, excepting in one small portion in the right eye.

Here in an area of 2 papilla diameters in a vertical, and 3 in a horizontal direction; the retina was prominent and gray-green, with a wave-like yellow-white striation. This area began a half papilla diameter inward from the disc and reached, with its upper margin, a line drawn through the middle of the disc in the horizontal meridian.

The elevation of this dim area was at its highest $1\frac{1}{8}$ mm. and gradually fell off toward the margin. I could not make certain whether or not this portion of the retina floated. The blood-vessels, which in this place are commonly hardly noticed, appeared, in comparison with the other eye, very distinct, on account of their containing more blood, and of the dimness of this portion of the retina. In the course of the observation they helped in judging the possible growth of the affected part. Examination of the inverted and upright image gave this same result.

"I ask for your opinion," said the doctor, who knew the malignancy of sarcoma. In my mind there was at once no doubt of sarcoma; yet the smallness of the supposed tumor as well as its slow growth, made me waver.

And, yet, what else could we think of.

1. It might be a simple, but rare form of myopic detachment of the retina; this was supported by the myopic refraction, the age of the patient, the gradual falling off toward the margin, the absence of glaucomatous symptoms after instillation of atropia. Graefe, in his time, considered this last symptom as of the greatest importance. On the other hand, the slow development, the unchanged localization, the normal tension (detachment of the retina is usually accompanied by reduced tension) and the perfectly normal vitreous body, spoke against detachment. In spite of long-continued search I could not detect a single opacity in the vitreous body. I want to lay particular stress on this point, as I do not remember to have missed such in a single case of simple detachment of the retina. Even with the temporary detachment of the retina

due to choroidetinitis albuminurica gravidarum, I have usually found opacities in the vitreous body. The color gave no decided indication. When such tumors are larger and lie close to the retina we are sometimes enabled to draw conclusions from a certain yellow hue which is mixed with the gray-green, yet this does not always prove true. When, however, the retina is separated from the tumor by an exudate, the picture often exactly resembles that of a simple detachment. On account of the smallness of the swelling in our case, protrusions and folds of the retina were of no value as diagnostic signs, as they sometimes are.

My opinion, therefore, was for a tumor, but the diagnosis was not certain. On account of the situation of the focus I did not think it advisable to make a scleral puncture nor an explorative puncture with the Pravatz syringe, after the recommendation of Schweigger.

2. Detachment of the choroid. This extremely rare affection, which presents the picture of a round prominence and in which the normal choroidal vessels are visible through the retina, was out of the question in our patient, as such cases always show a diminished tension.

3. Exudative choroiditis with secondary detachment of the retina. Such cases usually show external signs of inflammation and exudation in the vitreous body; yet, there are some forms which give a picture very similar to the one in our case. I have seen them in lues; inunctions brought about restitution. Sometimes other uncertain aetiological factors seemed to be at work. I discarded this diagnosis in the case under consideration on account of the absence of lues as well as of any other constitutional anomaly and of the localized character of the affection.

4. Choroidal haemorrhage. The color, the localization and the absence of any plausible aetiological factor, made this diagnosis impossible.

5. Subretinal cysticercus. The shape, the absence of movements, of vitreous opacities and choroidal foci, the scarcity of cysticercus since the introduction of slaughtering-houses in all towns permitted me to disregard this possibility at once.

6. Conglobated tubercles of the choroid. But the doctor was perfectly healthy.

7. Gumma between retina and choroid. Gumma is not

infrequently found in the ciliary body, I have never seen it in the choroid, and since I have seen an exceedingly large number of patients, this is probably of an extremely rare occurrence. Yet, in our case, there was no lues and vitreous opacities which, with preference, accompany choroidal affections, were lacking.

Considering all these points I arrived at the diagnosis of sarcoma, but since there remained the possibility of an error, I advised inunctions and sudorifera, besides iodide of potassium.

After thirty inunctions no improvement had taken place; on the contrary, the detachment seemed increased.

It was a serious matter to decide to propose the enucleation of an eye which still had $V.=\frac{1}{2}$, and which caused no farther disagreeable symptoms than an occasional sparkling.

January 17, the eye was enucleated, with ether narcosis. Healing was uninterrupted.

In the hardened and divided eyeball, down and inward, beginning immediately at the papilla, a flat detachment of the retina was found, of about 12 mm. diameter, directly behind and separated from it by a layer of coagulated exudation, barely 1 mm. thick, a flat, roundish tumor, dark-gray in color, of firm consistency at its margin, gradually passing over into the apparently healthy choroid. At the sclera this tumor ended with a sharp edge, being firmly adherent to the membrane, but nowhere entering it. The largest diameter of the tumor was 6, the smallest 2 mm.; its thickness nowhere beyond 1.5 mm.

Microscopically the tumor consisted of spindle-shaped cells of medium size with a large, distinct nucleus; they were very closely packed and no intracellular tissue was found. In some parts there were small round cells between the tumor-cells, and in some areas an areolar arrangement existed. In these areas the round cells were especially numerous. There was, further, present a large amount of black-brown pigment, in small separate granules as well as in large conglomerate masses. The cells were arranged in broad tracts crossing each other trabecula-like; between these, especially near the thinner edge of the tumor, a number of broad spaces with thin walls were found completely filled with red blood-cells. The transition into the choroid is a perfectly natural one. From which layer of the choroid the tumor took its origin could not be

determined. The tumor was covered by the retinal pigment epithelium, then followed a thin layer of homogeneous coagulated exudation containing a few pigment granules. Then came normal retina.

The tumor was, therefore, a melanotic spindle-cell sarcoma of the choroid which had not entered the neighboring tissues.

In the extensive work of Fuchs, referring to 195 cases of melanotic choroidal sarcoma, there are only two cases similar to ours, one by Hirschberg, with $V.=\frac{1}{2}$ and one by Knies, with $V.=\frac{2}{3}$.

Considering that in our case the tumor was extremely hard and firm, that in consequence its dissemination by broken particles was very improbable, that it was very poor in blood-vessels and pigment, that it was as small as probably ever any such tumor which was removed by operation, I am of the conviction that our patient can look joyfully into the future and that he will be spared metastatic recurrences.

A CASE OF GLAUCOMA, CHRONICUM SIMPLEX,
IN A GIRL THIRTEEN YEARS OF AGE,
EVIDENTLY INDUCED BY THE IN-
STILLATION OF ATROPINE.

BY ADOLF ALT, M.D., ST. LOUIS, MO.

IN THIS Journal (January, 1893) Dr. S. C. Ayres reported a case of glaucoma in a girl, 18 years of age, whose eyesight had been failing for two or three years. The disease then had probably attacked the girl when 15 or 16 years of age.

Cases of glaucoma in the young are so seldom seen that a report of the following case, which I have only seen a few days ago, may prove of interest:

Miss C. R., 18 years of age, of Los Angeles, Cal., was brought to my office on account of blindness of the left eye, and increasing loss of vision in the right eye.

The following history was obtained: Five years ago the mother took the girl to see an oculist on account of what

seemed to have been asthenopic symptoms. In order to examine the refraction the oculist instilled several drops of atropine. Almost immediately thereupon the left eye became blind and ever since its pupil has remained dilated, *ad maximum*. This condition has remained unaltered to this day. Once in a while she has had pain in this eye and on the side of the head. The right eye never was as good after the instillation of atropine, and has ever since been failing more and more, and now is, as the patient expressed it, half-sighted.

She was told that this terrible and unforeseen result of the instillation of atropine was caused "by an affection of the great sympathetic due to female troubles. The latter again were due to her being menstruated every two weeks since her 12th year, and to an imperfectly perforated hymen." This latter deformity had been removed by operation a few months ago.

The girl was tall and slender, but not unhealthy in appearance.

I found the left pupil dilated *ad maximum*, and immovable on the stimulus of daylight, slightly movable with strong artificial light. $V=0$. A few enlarged episcleral veins; $+T2$ (?). Very deep glaucomatous excavation in a myopic eye.

The right eye also showed a few enlarged and slightly tortuous episcleral veins. The pupil was very large, but sluggishly contracted on the stimulus of light. $V=15/20$ eccentrically, with -1 D. $\bigcirc -0.75$ D. cyl. ax. $90^{\circ} 20/20$. No further improvement; $+T1$. The field was reduced to an oval with the largest diameter horizontally beginning almost at the macula lutea. Within this field and near the macula a small relative scotoma of a diameter of about 10° could be made out. The papilla showed a glaucomatous excavation, but not quite peripheral, and not as deep as in the fellow eye.

The treatment in these five years seems to have been only the changing about every six months of the glasses, although she confessed that eserine had been given her, but being afraid of drops in her eye, she had not used them again after the first trial, which proved somewhat painful.

MEDICAL SOCIETIES.

PROCEEDINGS OF THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

FRIDAY, JULY 7, 1899.

H. R. SWANZY, F.R.C.S.I., President, in the Chair.

CHANGES IN THE CONJUNCTIVA PRODUCED BY CHRONIC INFLAMMATION.

MAJOR H. HERBERT, I.M.S., read a paper on this subject. He said that (1) in the conjunctiva one might trace the development of normal adenoid tissue from ordinary connective tissue. The cells became more numerous, and many connective tissue cells were changed into large plasma cells diffusely scattered, and into small round cells, mostly grouped into follicles and lymph heaps. These small round cells or lymphocytes were young plasma cells, and always had among them larger plasma cells undergoing mitosis. (2) In follicular conjunctivitis and trachoma the new follicular formations might differ from normal in being deficient in supporting stroma and blood vessels. The first stage of deficiency was seen in columns of young cells lying free in lymph spaces; a more advanced stage was found in much larger collections lying in lymph vessels, encapsulated by the vessel walls. (3) In the retrogression of follicles the cells were (*a*) carried away in the lymphatics, or (*b*) became amœboid and traveled to the surface or passed directly into small blood vessels, or (*c*) underwent colliquative and hyaline degeneration. (4) Scar tissue might be formed in very chronic simple conjunctivitis. (5) Large palpebral papillæ like those of spring catarrh might develop from trachoma follicles (cases were quoted and tissues shown). (6) Conjunctival cysts in great number in the upper tarsal membrane might arise from distension of tubular epithelial downgrowths, the result of chronic, generally trachomatous, conjunctivitis (a series of

cases analyzed and cyst contents investigated). (7) Stellwag's brawny trachoma appeared to be due to a basophile degeneration of connective tissue fibers.

MR. SYDNEY STEPHENSON, after remarking on the value of the new methods of staining, said he had been interested to note that in trachoma the changes began in the lymphatic spaces and follicles. This explained the enlargement of the preauricular and cervical glands, and occasionally of other glands, seen in this disease. He also remarked on the unimportance of goblet cells, and of mast cells found in the conjunctiva. He asked if Major Herbert had been able to find any difference between follicular and granular conjunctivitis in his specimens.

In reply, MAJOR HERBERT said he had been unable to detect any difference.

PLASTIC OPERATION FOR CONTRACTED SOCKET.

MR. F. RICHARDSON CROSS described this operation. Last year before the Society he had described an operation for contracted socket, which consisted in a free division of the conjunctiva at the bottom of the socket and also of the tissues deeper in the orbit, and the insertion of a flap of skin from the temporal region turned on its pedicle, and placed at the deepest part of the socket. The case on which he had done the operation was still a success, and the skin had become much like conjunctiva. He had recently modified the operation by taking a finger-shaped flap from the upper lid, and inserting in the deepest part of the socket; he had obtained more effect by this operation; the skin of the lid took on a conjunctival character sooner than the skin from the temple. In answer to the PRESIDENT he said no ectropion resulted.

A CASE OF PENETRATING WOUND OF THE ORBIT FOLLOWED BY MENINGITIS; TREPHINING; RECOVERY.

DR. ROCKLIFFE and MR. HAINWORTH reported this case. The patient was struck in the left eye in a drunken brawl by a foreign seaman, evidently with a pipe in his hand, whereby $3\frac{1}{2}$ inches of the stem, mounted by a copper band, were driven deeply into the orbit; a considerable amount of force was required to dislodge it from its firm position, and when removed

the stem was plugged with some doubtful matter. The wound being thoroughly cleansed by perchloride and dressed with carbolic acid, all went well until the seventh day; when, preceded by frontal headache, the pulse dropped to 48, and the temperature became subnormal; followed on the eighth day by a rigor and rise of temperature to 102.2° . A localized abscess being suspected, the left temporal region was trephined; no pus was found, but a considerable amount of fluid withdrawn by a trocar from the lateral ventricles. With the exception of further rigors, accompanied by subnormal pulse, the patient made a complete recovery in one month, during which he had right partial facial paralysis, left external strabismus, and partial aphasia, due, as Mr. Hainworth surmised, to irritation of the VIth, and damage to Broca's convolution by the trephine, the rigors being explained by possibly some irritation set up around the seat of the operation. Cases were quoted showing the usual frequent mortality in such injuries.

CARD SPECIMENS.

MR. LINDSAY JOHNSON—Macula Chromoscope.

MR. J. D. AMENABAR—Suction Apparatus for Soft Cataract.

MR. H. JULER—Sclerosing Keratitis.

MR. C. D. MARSHALL—Two Specimens Showing Grains of Gunpowder in the Eyeball.

MR. JOHN GRIFFITH—(1) An Unusual Form of Retinitis; (2) A microscopic Specimen of a Perithelial Sarcoma of the Choroid.

MR. H. GRIMSDALE—Nævus of the Iris.

MR. W. T. HOLMES SPICER—Œdema of Lids.

MR. F. RICHARDSON CROSS—A Dressing Basket for Eye Work.

MR. E. C. FISCHER—Case of Detached Retina Cured by Rest.

MR. DOYNE—Opacity of Cornea.

MR. ARNOLD LAWSON—Case of Spring Catarrh.

MR. DONALD GUNN—Tuberculous Ulcer of Lid.

ELECTION OF OFFICERS.

The annual general meeting was held afterwards for the

adoption of the report. The following officers were elected for the next year:

President—G. Anderson Critchett.

Vice-Presidents—E. Nettleship, Henry Eales (Birmingham), W. A. Brailey, M.D., Priestley Smith (Birmingham), F. R. Cross (Clifton), George Cowell, H. R. Swanzy, P. H. Mules, M.D. (Wrexham), Henry Juler, S. J. Sharkey, M.D.

Treasurer—John Abercrombie, M.D.

Secretaries—James Taylor, M.D.; E. Treacher Collins.

Librarian—W. Adams Frost.

Other Members of Council—Charles J. Oldham (Brighton), Howard H. Tooth, M.D., W. A. Turner, M.D., G. E. Wherry, M.B. (Cambridge), S. H. Habershon, M.D., J. B. Lawford, W. J. Cant (Lincoln), Sydney Stephenson, George Mackay, M.D., (Edinburgh), Patrick Maxwell, M.D. (Dublin), Charles Shears (Liverpool), W. T. Holmes Spicer.—(*British Medical Journal*).

SIXTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

SECTION ON OPHTHALMOLOGY.

PORPSMOUTH, AUGUST, 1899.

First Day.

The President of the Section, MR. SIMEON SNELL (Sheffield) opened the business with some few general remarks, and then proceeded to read a paper on "The Prevention of Eye Accidents to Iron Workers by Pieces of Metal Flying Off the Tools or the Moulding." He strongly advocated the wearing of some protecting device, and showed some wire gauze which he highly recommended; glass, even the hardest, was of but little use except to grinders. He thought that the use of pneumatic clippers, the arrangement of the workers with canvas shields interposed, and the wearing of suitable protectors, would render eye accidents very uncommon.

MR. RICHARDSON CROSS (Bristol) opened the discussion on

the "Pathological Signification of Sympathetic Irritation and Sympathetic Ophthalmia," and entered most fully into the question. He thought that the microbic, combined with the reflex nervous, theory would together explain some points at present unexplained, by either theory alone.

DR. LANDOLT (Paris) strongly condemned irritating a wounded eye by injections and other treatment, and thought that dangerous eyes should be excised.

MR. MC HARDY was pleased to find such unanimity of opinion concerning the treatment of the disease.

Surgeon-General CALEY recounted an interesting case in which the irritative symptoms disappeared on removing the eye.

MR. DEVEREUX MARSHALL discussed at length current pathological theories, and mentioned the results of some of his examinations.

DR. DE SCHWEINITZ (Philadelphia) said he entirely agreed with the previous speakers, and agreed with Dr. Devereux Marshall in his criticism of Deutschmann's theory. He strongly advocated examining not only the eye but also the blood and other organs which might throw some light on the disease.

DR. REEVE (Toronto) recounted two cases.

DR. A. BRONNER (Bradford) also mentioned a case which followed a blow on one eye from a fist.

THE PRESIDENT congratulated Mr. Cross, and fully agreed that at present there was no treatment save removal of the eye.

DR. A. BRONNER (Bradford) read a paper on "The Use of Homatropine Drops in Some Cases of Muscular Asthenopia," and gave several examples of cases.

THE PRESIDENT was greatly in favor of homatropine and cocaine drops.

MR. ARNOLD LAWSON thought that in most cases homatropine was sufficient, but that occasionally atropine was indispensable.

DR. LODGE recounted some cases he had operated upon for high myopia with good results.

MR. RICHARDSON CROSS thought that no one who had done the operation would be likely to give it up as the results were so satisfactory.

DR. BRONNER thought that high myopia was more common than was generally supposed, and that early linear extraction was essential.

MR. JULER was of the same opinion.

THE PRESIDENT thought that the anterior capsule should be freely opened, and the lens matter let out without delay.

Second Day.

MR. E. TREACHER COLLINS read a paper on "Exophthalmos." He divided the cases into traumatic and non-traumatic. He described five cases, and showed photographs of the patients in the lantern. He entered in an elaborate manner into the theories he entertained concerning the disease.

THE PRESIDENT said that he had seen several cases of a similar nature.

DR. DE SCHWEINITZ said that he had recorded a case in which he thought the exophthalmos was due to orbital cellulitis.

MR. RICHARDSON CROSS mentioned a case which followed an operation on the Gasserian ganglion for severe fifth nerve neuralgia.

Deputy Surgeon-General CAYLEY opened the discussion on "The Visual Tests Employed in the Navy, Army, and Mercantile Marine, and Their Efficiency." For the army recruits the sight required was about one fourth of normal vision; this was equal to myopia of about 1.75 D.; while for the departments and militia it was only half this, and equalled myopia of about 3.5 D. With modern weapons he considered that this minimum vision required was too low. Color-blindness and hypermetropia might pass undetected in the soldier. For a commissioned officer the test was more severe. For the Royal Navy normal sight was essential, though there was a rider which allowed the examiners some latitude. There were, however, no absolute rules to guide the surgeons. In the mercantile marine the regulations were all in confusion. For ordinary seamen no test whatever was used, and the rules were too slack to ensure good sight even for officers. For the English pilot service no test was enforced, while in the Indian pilot service strict tests were applied.

DR. LANDOLT (Paris) then read a paper on "The Determination of Acuteness of Vision, the Principle of Its Determination, and the Tests for Visual Acuity." He demonstrated and explained his new tests, which roughly consisted of a broken circle in which the candidate had to state the position of the gap.

THE SECRETARY then read some notes by DR. GEORGE

MACKAY, who quoted numerous cases in which the patients had become inefficient on account of defective vision, which might easily have been determined by suitable examination before they were admitted.

MR. T. H. BICKERTON read a paper on the part that color-blindness and defective vision played in the production of collisions at sea at night and at other times.

MR. MC HARDY confined his remarks to the tests used in the Royal Navy; while Colonel DRAKE-BROCKMAN, I.M.S., expressed the opinion that the present sight test was most inefficient with modern methods.

MR. RICHARDSON CROSS thought that physique as well as eyesight should count for far more than it did. He was quite sure that the tests were inefficiently applied, and could be dodged to a great extent.

MR. DEVEREUX MARSHALL asked if captains of guns were ever examined after their admission into the service, and he also mentioned the inefficiency of the application of tests for stockers in the navy.

Deputy Surgeon-General CAYLEY, in reply, stated that he thought there was no further examination made after the men were admitted, unless they were detailed for special service.

MR. JOHN GRIFFITH read a paper on "Primary Sarcoma of the Conjunctival Fornix," upon which remarks were made by MR. DEVEREUX MARSHALL and MR. TREACHER COLLINS, who mentioned cases.

DR. JAMES HINSHELWOOD read a paper on "The Use of Euphthalmin; a New Mydriatic." He considered that euphthalmin, although it did not completely fulfill all the conditions of an ideal mydriatic, yet approximated to this more closely than any other mydriatic, as it caused rapid dilatation of the pupil, which soon returned to its normal condition.

A resolution concerning the tests used in the mercantile marine was passed, and was subsequently reported to the concluding general meeting of the Association on Friday.

Third Day.

DR. BULL (Paris) read a paper on "The Stereoscope as a Test for the Ocular Muscles," and described the various tests he employed by means of the stereoscope.

MR. WATSON GRIFFIN (Brighton) described five cases illus-

trating the value of the correction of hyperphoria with vertical prisms, in which the patients were unable to use their correction without the prisms.

DR. REEVE (Toronto) thought that in one of Mr. Griffin's cases, which was corrected with 0.23 prism in each eye, a slight decentring of the glass would be equally effective, though in his own cases he often found that more hyperphoria became manifest after the original correction.

MR. ARNOLD LAWSON read a paper on "The Correction of Refractive Errors in the Treatment of Trachoma." He described two cases in which, after a temporary improvement with local treatment, they ceased to get better, but when the refractive errors were corrected they rapidly got well. He strongly recommended the use of glasses when the corneæ were sufficiently clear to estimate the refraction.

Colonel DRAKE-BROCKMAN, who had had great experience of the disease in India, used to correct the refraction as a routine treatment, and was certain of its beneficial effect in many cases.

DR. DE SCHWEINITZ, though he had no actual experience in the modification of trachoma by means of the correction of refractive errors, thought that like many other inflammatory affections it was likely to be benefited by such correction.

A paper by DR. JOHN HERN on "The Eye Symptoms in Hay Fever" was read by the Secretary. In it Dr. Hern described the symptoms, but was uncertain as to its cause.

MR. DEVEREUX MARSHALL, who was well acquainted with the symptoms from his personal experience, said he had found treatment most unsatisfactory, and was by no means certain as to the cause.

A paper by MR. KENNETH SCOTT, of Cairo, on "Destructive Ulceration of the Eyelid" was, in his absence, read by the Secretary.

MR. ARNOLD LAWSON suggested that the case was one of gumma of the conjunctiva, and Colonel DRAKE-BROCKMAN said that he had seen cases exactly resembling this which were undoubtedly syphilitic; he had seen gummata greatly benefited by europhen.—*British Medical Journal*.

OBITUARY.

ALFRED GRAEFE.

Alfred Graefe, whom but recently death has torn from us, was one of the few who witnessed, during their lifetime, from the very beginning, the enormous development of ophthalmology following the invention of the ophthalmoscope. He was a cousin of the famous Albrecht von Graefe, who almost alone has laid the foundations of the whole modern ophthalmology; he was his friend, and proudly called himself his pupil. In him he had a teacher who, though of almost the same age, by the greatness of his mind and heart, exerted a powerful and lasting influence on Alfred's further development. His great teacher introduced him into the course in which, accompanied with the highest success, due to his own diligence and innate talent, he continued till the end of his life.

The following short notes concerning Alfred Graefe's life we owe to the pen of his youngest son, who kindly permits us to use them.

Alfred Graefe was born November 23, 1830, in the castle of his grandfather, Martins-Kirchen, near Muehlberg an der Elbe. His earlier years were spent there and at Weissenfels, where his father owned a small charming estate. His education was carefully conducted by his excellent father, who had served under Napoleon in the unfortunate Russian campaign, and had been rewarded with the Cross of the Legion of Honor.

The boy's mother, who excelled in gifts of the mind, was probably the one to first arouse in him the sense for the beautiful in art which later on marked the man.

Graefe wanted to join the military service like his father; but, after having absolved the Gymnasium, he changed his plan and decided to study a profession. Soon after he entered the University of Heidelberg as a happy student. He remained true to his love of the science of mathematics for which he had shown great interest at the Gymnasium and this explains why, among the different medical specialties, he was attracted

particularly by ophthalmology. From Heidelberg he went to Wuerzburg, then to Halle, Leipzig, Prag, Berlin and, finally, to Paris, where, like his cousin and teacher, Albrecht von Graefe, he finished his studies.

During the time of his academic studies Alfred Graefe was intimate with Bodenstedt, Koegel, the late Court Preacher, and with the poets, Julius Grosse and Otto Roquette. Having finished his studies he married the daughter of City Councilman Dr. Colberg, an excellent and prominent citizen of the City of Halle. Graefe's married life was of the happiest, and it is probably owing to the most sacrificing love and care of his wife that he was so long preserved for the good of, and as an ornament to humanity.

The young married couple moved to Berlin, where they rented a modest house on Karl street, opposite the Clinic of his famous cousin. In the position of first assistant to Albrecht von Graefe, Alfred Graefe had the opportunity to lay the foundation for his future development. The noble conception of the medical profession which he was taught by his cousin Albrecht, was readily accepted by Alfred and prompted him to the unselfish emulation of so high a model. In fact, Alfred Graefe always practiced medicine in the sense of a friendly benefactor.

Having remained for five years (1853 to 1858) with Albrecht von Graefe, Alfred went to Halle and located there in 1858. At the same time he founded the later on so famous eye clinic, at first with only nine beds. Soon this clinic so modestly begun became insufficient. The people came in greater and greater numbers to seek his aid. In 1873 he was created Professor of Ophthalmology, and in 1875 he could give room and care in the newly-built clinic to about 130 patients. His wife assisted him in this with the greatest devotion; she superintended with care both the extensive private and public clinics.

Graefe's literary talent, too, merits decided recognition. The friend of his youth, Julius Grosse, Director of the Schiller Archives at Weimar, said that should the duties of a busy practitioner permit, his name would be mentioned among the first in literature. And Graefe managed to find some time for literary work. Although he did not give his poems to the

general public, yet a small collection, full of beautiful thoughts, was published as manuscript for his circle of friends.

The first larger work which Alfred Graefe published while still an assistant (1858) has the title: "Clinical Analysis of the Affections of the Motor Apparatus of the Eye." This paper, which was dedicated to "his friend and teacher, Albrecht von Graefe," deals with a subject which he called the one of his preference all through his life. Several smaller papers of his deal directly or indirectly with the same subject; among them his paper on the use of prisms in order to detect simulation, as also his last work, which appeared in 1897, "On the Vision of the Strabotic." He again selected the same subject for his own special part in the great "Cyclopedia of Ophthalmology," published by him and Th. Saemisch, and he was the first who with renewed vigor re-edited his chapter for the second edition of this great work.

His greatest merit in the field of ophthalmology, in our opinion, lies in the fact that he introduced Lister's ideas of sterilization into our specialty, and into use in operative procedures on the eye, especially in the extraction of cataract. At first Lister's idea was to free the surrounding air from infectious germs by means of carbolic acid; in this form it could not be applied to eye operations. After experimenting for several years Alfred Graefe found a method which was suited for such operations. He could proudly state that in 114 subsequent cataract extractions he had had only three losses, one of which was clearly brought about by the patient himself. Such favorable results had never previously been obtained. Although this magnificent result, which excelled all previous experience, was somewhat reduced by the experience of subsequent years, yet to Alfred Graefe belongs immortal glory in having paved the way for the aseptic and antiseptic methods of operating on the eye, to deviate from which would to-day be considered a crime.

Suppuration after cataract extraction, by which, in olden times, innumerable eyes were destroyed, and against which Alfred Graefe had fought, in vain, with all his energy, since the introduction of Lister's antisepsis has become a rarity. The last 1074 extractions which Alfred Graefe reported, with statistics, showed a loss of 0.93 per cent. Once he operated 448 times in succession without a single case of suppuration.

The same loss in consequence of suppuration (0.9 per cent.) is given in the report of 1000 cataract extractions performed in the clinic of Dr. Karl Theodor, Duke in Bavaria, in which asepsis and antisepsis were observed in the most painstaking manner, and similarly good results are probably obtained to-day in all clinics in which minute attention is paid to the rules of Lister's antisepsis.

Since the invention of the ophthalmoscope the introduction of Lister's method into ophthalmological practice is, without doubt, our greatest gain.

Another field of ophthalmological practice in which Alfred Graefe has never been excelled, is that of the cysticercus in the human eye, and its removal. It is well known that soon after the invention of the ophthalmoscope Albrecht von Graefe, as the first, saw cysticercus in the interior of the eye, and removed it on several occasions successfully by operative procedures. In the course of years Alfred Graefe had occasion to see and treat more such cases than any living oculist. He practiced this peculiar operation on the eye methodically, and constructed a special localizing ophthalmoscope in order to be able to perform this operation with the greatest security and accuracy.

Once, having removed two cysticerci in one sitting from one and the same eye (July 12, 1892), he, in a jovial manner, announced to his friends and acquaintances elegantly printed on a gold-bordered card: "The happy delivery of two lively cysticerci."

To consider his many ophthalmological papers is not possible in this place. Most of them have appeared in *Graef's Archiv f. Ophthalmology* and in the *Monatsblaetter f. Augenheilkunde*. From their form and contents they will for all future times remain welcome and instructive reading and ornaments to these publications.—*Klinische Monatsblaetter f. Augenheilkunde*.

CARL WALDHAUER.

Carl Waldhauer was born December 20, 1820, at Sallen, in Kurland, and died April 30, 1899, at Mitau, in Kurland.

Again one of the oldest pupils of von Graefe has departed. In 1858 Waldhauer located at Riga as oculist, and from 1863 to 1879, was director of the Widow Reimers' Eye Hospital. His work here was blessed with great success. He also educated a number of young oculists. Later on he moved to Mitau, but was forced to give up his practice on account of a serious disease of the eyes.

His publications all dealt with practical ophthalmology, especially with the operation for trichiasis, which is so frequent in Kurland where trachoma is extremely prevalent, with interesting cases and injuries. He was in looks and manners a true German, and will live in the memory of all who were fortunate enough to know him.

The following are the most important of his publications: Cataract Punctata (*Arch. f. Ophth.*, XXXI, 1); Tumors of the Eye and Orbit (*Petersburg. Med. Woch.*, 1877); Operation for Ptosis (*Ibid.*, 1886); Diabetic Cataract (*Ibid.*, 1884); l'Operation du Trichiasis (*Arch. d'Opht.*, 1882); An Iris Anomaly (*Klin. Mon. Bl.*, 1866); Sympathetic Ophthalmia (*Ibid.*, 1883); Operation for Trichiasis (*Ibid.*, 1897); An Injury to the Eye (*Centbl. f. Augen.*, 1889); Foreign Bodies in the Orbit (*D. Z. f. Chir.*, XXIX).—*Cent. f. p. Augenhlk.*

NEWS ITEMS.

IN JENA a new University Eye-Clinic has just been completed, Professor Kuhnt is the Director.

DR. HERMANN SNELLEN, JR. has been made Professor of Ophthalmology in the University of Utrecht, Holland.

DR. G. C. HARLAN has been elected President of Wills' Eye Hospital, Philadelphia, and Dr. Charles A. Oliver, Secretary of the Staff.

THE ROYAL LONDON OPHTHALMIC HOSPITAL, formerly at Moorfields, has been moved to a beautiful new building in the City Road. It has 50 beds.

A NEW EYE-CLINIC has been opened in the University of Breslau. It is due to Professor Foerster's effort that it was built. His successor, Professor Uhthoff, is the Director. It has 48 beds.

DR. R. L. RANDOLPH was awarded the Alvarengo Prize by the College of Physicians and Surgeons of Philadelphia, for an Essay on "Regeneration of the Crystalline Lens," an experimental study.

OUR ESTEEMED collaborator and friend, Dr. B. E. Fryer, has resigned the chair of Ophthalmology in the University Medical School of Kansas City. He has been elected Prof. of Ophthalmology in the Medico-Chirurgical and in the Woman's Medical College of Kansas City. Dr. J. S. Lichtenberger received the appointment of Adjunct in this branch in the same schools.

PAMPHLETS RECEIVED.

"The Modern Use of Synthetics," by R. W. Wilcox, M.D.

"Advice to Gonorrhœal Patients," by F. C. Valentine, M.D.

"Vesicular Degeneration of the Chorion," by C. E. Black, M.D.

"Annual Report of the St. Louis Mullanphy Hospital for 1898."

"The Surgical Treatment of Trachoma," by S. P. Eagleton, M.D.

"Ninth Annual Report of the Eye, Ear, Nose and Throat Hospital," New Orleans, La. (1898).

"Historique des Applications Pratiques de la Phonétique Expérimentale," by Abbé Rousselat.

"Fortieth Annual Report of the Nederlandsch Gasthuis voor Ooglijders," Utrecht, Holland. (1898).

"The Employment of the Kalt Suture in Critical Cases of Cataract Extraction," by S. B. Risley, M.D.

"Some of the Failures, Immediate and Remote, met with after Cataract Extraction," by R. M. Ray, M.D.

"Resection of the Cervical Sympathetic in Glaucoma," by T. Jannesco, M.D., translated by J. M. Ball, M.D.

"Implantation of Sponge in the Orbit After Enucleation: A Preliminary Statement," by S. D. Risley, M.D.

"Report of a Case of Accidental Inoculation of the Eye-ball with Vaccine Virus," by S. P. Eagleton, M.D.

"One Hundred and Sixty Cases of Cancer of the Pregnant Uterus Occurring since 1886," by G. H. Noble, M.D.